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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,999	02/02/2001	Paul Stiros	8412	7441

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EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 11/19/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/775,999

Applicant(s)

STIROS ET AL.

Examiner

MONZER R CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This non-final office action is in response to the amendment received on 08/28/2002

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13, 15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959).

With respect to claims 1, 9 and 11, Aibe teaches the following: an air-deodorizing device (figure 3, 31) and a method (col.20, test example 3), which includes a filter member (figure 3, unlabeled entire filter structure made up of 36 and the filter medium, which is disposed in upper part of 35), a filter element (figure 3, 36) with a filter medium (col.4, lines 5-7), an air moving member (figure 3, 35) such that the filter member is detachable from it (figure 1, 6 and col.13, lines 35-38), positioning the filter member inside a confined space (col.12, lines 67-68 and col.13, lines 1-2), neutralizing odor in the air of the confined space, positioning a second passive filter member (col.20, lines 63-66 and table 3, gas flow rate column) inside a confined space (col.20, test example 3) with a second substance (col.20, line 65) to deodorize the air. However, with respect to claims 1, 9, and 11; Aibe fails to disclose the use of sodium bicarbonate. Bermas, which is in the art of deodorizing the air in refrigerators (col.1, lines 11-15) using passive deodorizers (figure 1, 10), teaches that combining activated carbon and sodium bicarbonate is known in the art of deodorizing refrigerators (col.1, lines 49-54). Thus, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claims 2-5 and 17-18, Aibe teaches the following: the filter member (figure 2, 7) includes a cartridge (figure 1, 6) which has a top portion and a bottom portion (figure 2, such parts of 6 are not labeled), also the cartridge has air inlets in its top (figure 2, top portion of 6 is not labeled) and air outlets on its bottom (figure 2, bottom portion of 6 is not labeled), the air moving member (figure 2, the lower part of 2 which includes a fan) has a top portion (serves as a base for the filter member) with an air inlet therein (figure 2, top portion of the lower part of 2 on which 7 lies directly above), the cartridge (figure 1, 6) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member, and the air moving member includes a fan (figure 2, 8). Furthermore, the filter member is intrinsically held in place by the gravitational forces (suction of the fan) and the surface topology of the interfacing parts of filter member and air moving member. In addition, Aibe teaches that the location of the fan, the cartridge, the inlets and the outlets can be varied (col.9, lines 32-51, and col.14, lines 21-31). With respect to claim 5, the use of sodium bicarbonate has been addressed with regard to claims 1, 9, 11.

With respect to claim 18, the interfacing parts of the filter member and the air-moving member do not have hemispherical shapes. However, Aibe teaches that the gas inlet and outlet can be disposed in any position in the casing (col.14, lines 21-31) such that in order to insure that both the filter member and the air-moving member are always in touch, the shape of interfacing parts must intrinsically maintain such a connection by taking on any design such as hemispherical or the like.

With respect to claims 6-7, Bermas teaches the following: filter element (figure 2, 10) includes a container (figure 2, 40) with at least two air pervious sides (figure 4, 40 has two unlabeled sides), which contains sodium bicarbonate (col.1, line 51), the container is a bag (col.4, lines 51-52) made of air pervious material with sodium bicarbonate therein, and the filter medium includes activated carbon (col.4, line 41).

With respect to claim 8, Aibe discloses the use of activated carbon as part of the filter medium (col.4, lines 5-6).

With respect to claims 10 and 12, Aibe teaches that the confined space is inside a refrigerator (col.20, lines 22-23).

With respect to claims 13 and 15, Aibe discloses that the device can be used in a refrigerator (col.20, lines 22-23), which intrinsically includes compartments separate from the remainder of the confined space. Thus, in order to deodorize air in a refrigerator, inserting the device in the compartments or in the main section of the refrigerator is an intrinsic step in achieving such a goal. However, Aibe fails to disclose the use of sodium bicarbonate. Bermas teaches the use of a passive filter member (figure 1, 10), which includes sodium bicarbonate (col.1, line 51) to deodorize air in a refrigerator. As a result, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe in order to optimize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claim 19, the filter member (36) of Aibe is lifted upward from the air-moving member (35) for replacement (col.13, lines 35-38).

5. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959) and further in view of Aibe et al (U.S.P.N. 5,288,306).

With regard to claims 14 and 16, Aibe and Bermas fail to teach of interchangeably using first and second filter member in association with the air-moving member. However, Aibe teaches multiple filter members (figure 23, 195 and 196) that can be interchangeably used (col.8, lines 39-40 and col.11, lines 3-6) relative to the air-moving member (figure 23, 194) by being detachable. It would have been obvious to one having ordinary skill in the art to modify the method and apparatus of Aibe to include multiple filter members since utilizing a plurality of filter members having varying adsorbent affinities for malodorous components, even a gas containing many kinds of malodorous or toxic components can be efficiently eliminated (Aibe, col.8, lines 41-45).

Response to Arguments

6. Applicant's arguments filed 08/28/2002 have been fully considered but they are not persuasive.

The Aibe reference is applied to show that the use of multiple filter members interchangeably is known.

The examiner agrees with the applicant that the Bermas reference show a single freshening device. However, using more than one freshening device is obvious and does not result in unexpected results.

On page 5 of the response, applicant argues, "There is no teaching or disclosure in the Bermas and Aibe references of the desirability of combining passive and active

deodorizers in order to maximize the rate of deodorization inside refrigerators". Since both passive and active are known to deodorize air, then using both would result in obvious and expected results, which are to increase the rate of deodorization within refrigerators. Such a result is within the preview of an artisan. Also, Aibe does teach of using passive deodorizers in test example 3 (col.20, lines 63-66 and table 3, gas flow rate column).

On page 5 of the response, applicant argues, "the Bermas reference does state that sodium bicarbonate has been used to control odors in refrigerators, but only teaches using a mixture of activated carbon and zeolite". Bermas discloses the use of sodium bicarbonate to control odors in refrigerators such that it would have been obvious to one having ordinary skill in the art to include sodium bicarbonate because of its properties in controlling odors within refrigerators.

On page 6 of the response, applicant argues, "with respect to claim 5, neither reference discloses the use of sodium bicarbonate in a filter medium that is sufficiently pervious to air so that said fan can convey air through said filter member". Bermas does disclose the use of sodium bicarbonate (col.1, lines 32-33). Bermas goes on to further teach that it is known to use deodorizers in granular form so that a fan can draw air through the filter (sufficiently pervious) to remove odors (col.2, lines 11-17). In addition, one skilled in the art would have been motivated to modify Aibe's apparatus to include a known deodorizer such as sodium bicarbonate in granular form such that it is sufficiently pervious for the system to operate.

On page 6 of the response, applicant argues, "Bermas reference does not teach or disclose the use of sodium bicarbonate in the device". Bermas discloses that sodium bicarbonate is a known deodorizer used to remove odors within refrigerators. Adding such a known deodorizer to the device is obvious and would result in expected results.

On page 7 of the response, applicant argues, "neither of the references individually, or in combination, teach or disclose a device for emitting on or more substances into the atmosphere". For example, Aibe's apparatus emits a substance into the atmosphere, which is the deodorized air discharged from the outlet (34).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (703) 305-3605. The examiner can normally be reached on M-F 8:30-5:00.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (703) 308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-7719 for After Final communications.

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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Monzer R. Chorbaji *MRC*

Patent Examiner

AU 1744

November 15, 2002



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